



Environmental Sustainability and Quality Education: Perspectives from a community living in a context of poverty

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Abstract

This paper presents perspectives on sustainability, quality and relevance of education found in a resettlement community in Zimbabwe. The exploratory research triangulated data from community meetings, interviews, focus group discussions and digital photography. The results showed that the community lived in a context of risk and vulnerability where a range of economic, cultural, social and environment issues and poor quality of education posed a threat to the quality of life. Tensions in the community and between the school and community, lack of solidarity, and the weakening of the traditional Unhu/Ubuntu moral and ethical framework contributed to the community's failure to envision and implement interventions towards quality education and towards sustainable development. The participatory research helped ease these tensions, enabling it to realise opportunities to deal with some of its sustainability issues. It enhanced teacher–community relations, leading to cooperation and solidarity around school improvement and environmental projects. The case study demonstrated the relevance of environmental education and education for sustainable development to quality of formal education in the school community and to the quality of formal and informal education in the broader community context.

Introduction

The poor are both the victims and agents of environmental change.
(Chenje, Sola & Palecny, 1998:64)

Poverty, environmental degradation and despair are destroyers of people, of societies, of nations.
(Powell, 2002:online)

As indicated in the quotes above, the poor are said to be both the victims and agents of environmental damage and that poverty and environmental degradation have the potential to destroy people and societies (Chenje, Sola, & Palecny, 1998; WSSD, 2002). Given these insights, re-orienting education towards sustainable development involves significant efforts to empower the poor by paying due attention to the quality and relevance of education, a point of conflation in strategic frameworks of the New Partnership for Africa's Development (NEPAD), the African Union, and the Southern African Development Community (SADC) (UNESCO,

2006a). Education of good quality and that is relevant empowers people, including the poor, to meaningfully act on the challenges posed by vulnerability and risk and their sources (UNESCO, 2006). As described in the discourse around the United Nations Decade on Education for Sustainable Development (UNDESD), re-orienting education policies towards Education for Sustainable Development (ESD) is a necessary effort towards this empowerment. According to UNESCO (2006b:5), ESD '... enables people to foresee, face up to and solve the problems that threaten life on our planet. It also means education that disseminates the values and principles that are the basis of sustainable development' (UNESCO, 2006b:5). This research project proposes that re-orienting education theory and practice towards sustainability contributes to quality and relevance of education for all. In Africa, this is a focusing issue for research and development (Lotz-Sisitka, 2006, 2007). In the SADC, the many issues and challenges involving poverty, environmental degradation, increased health risk and food insecurity have been, rightfully, assessed to require an educational response for their alleviation (Lotz-Sisitka *et al.*, 2006a,b,c,d).

Study Purpose and Research Questions

The SADC ESD consultative reports¹ (Lotz-Sisitka *et al.*, 2006a,b,c,d), it emerged that re-orienting education towards sustainable development has potential for being an appropriate response to deal with poverty in society and to enhance potential for realisation of the Millennium Development Goals. This re-orientation could not be effective without researching and interrogating the vexing question of the relationship between ESD and quality and relevance for all in the SADC (UNESCO, 2006b). As a result, the SADC Regional Environmental Education Programme (REEP) facilitated exploratory research on this by providing seed funding to five higher education institutions in five SADC countries. This exploratory research was driven by two needs: (1) to consolidate and strengthen the integration of sustainable development concerns into mainstream education and learning, and (2) to address the major concern of the quality and relevance of education within the UNESCO framework of education for all in its broad sense (Lotz-Sisitka, 2007). The thinking behind this ongoing research is consistent with the need to make a clear case that ESD adds relevance and quality to educational initiatives, since this has been identified as an area of focus for ESD in Africa (UNESCO, 2006a).

This paper presents findings of an open-ended exploratory case study conducted in Zimbabwe. In this case study, people living in a poor resettlement community were engaged to accomplish three things: (1) mapping out environment and sustainability issues and practices, (2) proposing and implementing local educational and development projects to deal with those issues, and (3) mapping out perspectives on quality and relevance of education. This translated into three questions:

1. How does a local community understand and make sense of sustainability and its sustainability issues?
2. What are the perspectives of the local community on how sustainability issues must be addressed in education and in development projects?

3. How does a local community make sense of quality and relevance of education and learning *vis-à-vis* its sustainable livelihood?

In this study, 'community' referred to people and the area in which they live. Focus on quality and relevance of education was reflected in two contexts: the formal education context of the school and the broader social context of the resettled community. Participants therefore included learners and teachers in the school community and people such as parents, community leaders and other members of the broader local community whose children and members were likely to be served by this school. Our use of the term 'school community' is thus with reference to the school and the broader resettled community context.

Research Design and Methodology

The above framing of the research objectives and questions and the fact that the exploratory research targeted people living in the context of poverty, risk and vulnerability, made it imperative to adopt a research design that helped to alleviate these conditions. We were informed by Ruth Bleier (1984, 1986, cited in Lincoln & Denzin, 2000:1117) who postured that social research should be '... driven by an ameliorative purpose; it should seek to solve some problem, to allay some mal-distribution of resources, to meet a genuine need'. In this case study we, as participating researchers, tried to initiate a process of change and transformation, serving to an extent as *animateurs* (Kemmis & McTaggart, 2000).

Given this interest, the researchers socially engaged stakeholders in the community in reflecting upon sustainability issues, sustainability practices, and quality and relevance of education. We assumed that participatory and dialogic processes, when enacted with clear purpose, could raise personal and communal awareness and understanding of sustainable development issues and practices. We assumed too that dialogical approaches, as Bohm (1996) suggests, would enable members of the community and researchers to co-construct and think together, leading to co-learning (Wals, 2007). Glasser (2007:51) suggests that 'co-learning supports change, positive change in particular'. In addition, we assumed that dialogic processes and social engagement (Boothroyd & Fryer, 2004) had the possibility to interface the school system and the community in exploring perspectives on environmental, educational and social problems and their potential solutions. Kemmis and McTaggart explain: '*changing practices is a social process*' (2000:563, emphasis in original).

Data collection procedures

The first stage of exploration involved purposively selecting the community to participate in the exploratory research. Our interest was to locate a poor community that would be accessible to the researchers. A resettlement community in Masvingo province in the south of the country was identified. Masvingo lies in the Save-Limpopo ecological region in Zimbabwe. It lies in agro-regions 4 and 5 that receive a mere 300-600mm of annual rainfall with a 40-45% coefficient of variation (Chenje *et al.*, 1998). High consumption of wood for cooking, heating, and household construction has contributed to depletion of woodland resources, leading to

a 30% wood deficit and high soil erosion rates. In this province, most rural households were either poor (11%) or very poor (63%); only 26% of rural households were 'non-poor' (Chenje *et al.*, 1998). Much poverty was reflected by lack of food security.

The second procedure was an exploratory visit to the community where the lead researcher held a meeting with teachers, toured the school community and took photographs with permission. The third procedure involved three field visits to the school community by the team of researchers. Each visit entailed meeting and interacting with members of the school community, probing individual and group viewpoints on the research focal issues. Members of the community included learners, parents, teachers and community leaders. The school organised a community meeting during each visit. At these meetings learners performed songs, poems, dramas and role-plays whose transcripts depicted their perspectives on environmental, education and social issues.

Community meetings and focus group discussions provided participants with an opportunity to react and to build upon responses of other group members. This proved a good approach, as noted by Wilkinson (2004:181), who explains: 'One or more focus group members may enthusiastically extend, elaborate, or embroider an initially sketchy account.' Kemmis and McTaggart (2000:571) suggest too that 'both the action and the research aspects of action research *require* participation as well as the disciplinary effect of a collective' (emphasis in original). Tours enabled the researchers' opportunities to interact with and observe members of the community's perspectives and sustainability practices. Researchers naturalistically observed members of the community conducting their daily chores and provided complementing feedback. Follow-up visits were made – two between the first and second community visits, and one between the second and the third visit. These follow-ups provided insights into naturalistic life in the community and assured it of the research team's sustained interest in its education and development activities.

The fifth procedure arose out of the observations made during the first visit. The main observations we made were as follows:

- The community school was a satellite school located in an old farmhouse which was in a state of disrepair. The walls were not painted, the windows and doors were missing, and parts of the roof were collapsing.
- The school lacked desks and benches, textbooks and exercise books. Pupils sat on the floor or on stones for lessons. Pupils did not carry books to and from school and did not look well fed or groomed.
- The enrolment of the school was confirmed to be 120 children. Only between 70 and 80 were attending school on the visit. This was attributed to absenteeism and lack of enforcement of school attendance by parents or guardians.
- The satellite school offered classes up to Grade 6. At the end of Grade 6, learners transferred to the parent school to enable them to write the national Grade 7 (primary-school leaving) examinations. Some, as we learnt, simply dropped out after Grade 6.
- Teachers showed high enthusiasm and high expectations for the refurbishment and furnishing of the school, but held little hope of the community making this possible.

- A number of teachers and learners arrived at school late or were absent from school on the first and subsequent visits. All teachers commuted to school; they did not live in the community.

The fifth procedure involved exploring how to motivate agency among members of the community to improve quality. This required an element of advocacy in the research design (Lincoln & Denzin, 2000). The researchers started a 'waste' collection initiative involving discarded computer paper, old diaries, books, charts and models. These were donated to the school, leading to a teacher-led exercise project. This enabled all pupils to have somewhere to write their lessons. Some resource books, 'freebies' and learning resources (charts, games, resource books, information tracts) from the 4th World Environmental Education Congress (WEEC) (2007) as well as a national flag, a football and a netball were given to the school.

In summary, we tried to engage the full range of members of the community. We listened, observed and internalised perceptions, perspectives and the nature of interactions as they played themselves out. This allowed us to learn from the participants and them from us as is necessary in co-learning that is supportive to change (Glasser, 2007). Data collected took the form of field notes, transcripts of children's songs and poems, as well as digital photographs. These were analysed into themes and sub-themes following content analysis procedures (Ryan & Bernard, 2003). The authors (a team of three researchers) agreed on more than 80% on the themes in Table 1 to Table 4, which reflects a relatively high inter-coder agreement.

Results

Being exploratory research, some unexpected results emerged in the course of interacting with members of the community and with teachers and children in the school. First, there was an anticipated level of positive reception of the researchers and the research concept by the community. This is illustrated by participation of parents of both sexes and the community leaders. Second, the community recognised and identified sustainability issues that it initially perceived hapless to deal with. However, in the course of the exploratory research, some practical initiatives were proposed and implemented.

Context and setting of the community

The context and setting seemed to influence perceptions and agency concerning education and sustainability in this community. The resettlement community was located in Masvingo province; that is, in a poor agro-region where household poverty and lack of food security are common (Chenje *et al.*, 1998). The agro-region is vulnerable to droughts and to poor crop yields. A 'resettlement' is a new rural and farm settlement following the Zimbabwe land reform programme in which previously white-farmer-owned land was redistributed to the majority black landless citizens. The community in question is in a former dryland crop farm and ranch that is well endowed in mineral resources, particularly gold. The land pressure was evident from the use of some hillside and rocky areas for plots, crop fields and homesteads. Stream-bed and

stream-bank cropping and gardening was common since the dark clay loams on the banks were richer. Wells dug in the stream-bed provided a source of water for drinking and for the gardens.

Like many other new resettlements, the community was in the process of re-integrating people who previously would not have lived together. It brought together people from communal areas from a number of districts in Masvingo province, political activists, former farm workers, and people who came in to pan for gold. The last of these, colloquially termed *makorongoza*, were 'outsiders' prospecting for gold illegally. Some people were perceived to be social misfits. The community was heterogeneous too in terms of totem, ethnicity and values. Some settlers moved into the re-settlement with family, while others did not. Some had no intention of settling permanently.

In summary, members of the community had very diverse backgrounds and histories. Myers (1999), Netting (1993), and Smith and Williams (1999) postulated that people in new settlements such as this are often isolated from both their families and from the wider social framework of communities which define them. Kinship relationships are vestigial, and traditional values, social norms and family support structures are weakened. The research, in part, explored how this heterogeneity in the make-up of the community influences people's perspectives on sustainability and sustainable resource use and management and on education and sustainable development.

Sustainability issues and perspectives on sustainability

A key focal issue in the research was the question: How does the local community understand and make sense of sustainability and its sustainability issues? Table 1 summarises the perspectives on sustainability issues and its sub-themes. The data show that in this community, sustainability issues were economic, environmental, cultural or social. It is within these dimensions that issues of poverty, risk and vulnerability come to the fore. These factors may be contributing to the community's perspectives and practices, which may lead to more vulnerability to poverty.

Economic challenges were acknowledged in the community. Unemployment and the harsh macro-economic environment forced many people to take up gold panning even though it is illegal. Participation in gold panning threatened food security as families abandoned crop farming and gold-panning activities created open pits that posed a threat to animals and people. The pits also provided additional habitats and breeding facilities for mosquitoes, thus increasing the community's vulnerability to malaria. Small-scale mining and gold panning, stream-bank and steep-slope cultivation, slash-and-burn agriculture, burn-and-hunt practices, veldt fires and tree cutting contributed immensely to land degradation.

Many people perceived that taking panning for gold as alternative economic activity threatened the social fabric, the environment and the health and food security of the community. The causal lifestyles of miners and their associates, due to their real and perceived economic status, created fertile grounding for the spread of sexually transmitted infections (STIs) and HIV/AIDS. Besides this, many people, including 'outsider' gold panners, were not fully committed to settling permanently in this resettlement. Taking responsibility for environmental conservation and management is compromised in such a scenario, as is shown in a study of Cameroonian communities (Ayonghe & Amawa, 2007). When communities are

settled permanently, they view their environment's resources as part of their heritage, making it possible to take responsibility for their sustainable exploitation and utilisation. Non-permanent residency meant that housing structures were temporary and inadequate in number. For example, many homesteads with one or two 'temporary' huts were shared by several members of the family of different ages and both sexes. Where male or female adults, youths and children share sleeping quarters with children of the opposite sex there is high likelihood of sexual exploration and sexual abuse.

Table 1 shows that the community was experiencing sustainability issues that have cultural and social dimensions. The community faced challenges posed by hunger and ill health, including those due to malaria, tuberculosis and other lung infections, and HIV/AIDS. Inadequate clean

Table 1. Observations on the theme 'sustainability issues'

Themes	Sub-themes	Examples Observed or Cited	Stakeholder
Sustainability issues	Economic activities	Farming, small-scale mining, gold panning, <i>chikorongozza</i> , sale of fuel wood, hunting, prostitution.	Teachers, parents, community leaders
	Social issues	Poor school attendance, absenteeism, drop-out, old farmhouse school, poverty, hunger, ill health, malaria, tuberculosis and other lung infections, HIV/AIDS, orphans and vulnerable children, child-headed households, poor food security, quelea birds, springbok, hares, child abuse, sexual abuse, prostitution, poor housing, boys and girls sleeping together, idleness/laziness, transfers to distant Grade 7 school, inadequate clean water, hungry and undernourished children, <i>Havana chokurimisa</i> (no draught power, seed or fertiliser), changing values, heterogeneous and diverse community, inter-generational marriages (age gaps, early marriage, step-parents, polygamy).	Teachers, parents, pupils, community leaders
	Environmental issues	Land degradation, small-scale mining and gold panning (<i>chikorongozza</i>), stream-bank and steep-slope cultivation, invasive alien plants (<i>Lantana camara</i> , Eucalyptus), veld fires, slash-and-burn agriculture, burn-and-hunt practices, poaching, tree cutting, ZESA power outage and fuel wood marketing, Environmental Management Authority.	Teachers, parents, pupils, community leaders
	Cultural issues	Taboo, silence about HIV/AIDS, no cultural, sporting and recreational centre, weak social fabric, weakened <i>Unhu</i> , observe <i>Chisi</i> (day of rest) on a Wednesday.	Teachers, parents, pupils, community leaders

water supplies and a poor safety net for increasing numbers of orphaned and vulnerable children served to worsen the situation. Due to the impact of the HIV/AIDS pandemic and collapse of the institution of marriage, step-parented and child-headed households were now common. Teachers at the community school estimated that 20% of the children enrolled were orphans. Most were looked after by aged and needy grandparents. The challenges of HIV/AIDS were unlikely to abate due to poverty and due to taboo beliefs that curtailed talking about sexuality and about HIV/AIDS as the cause of illness and death. The casual lifestyles of youthful gold panners and prostitutes aggravated the situation and marriage patterns and other social practices added to the problem. Marriage of young girls to old men (inter-generational marriage), teen marriages and the marriage of young women to men with more than one wife (polygamy) was said to be common. The age gaps resulted in unstable families. The breakdown of marriages or the death of a spouse led to 'step-parenting', under which it was reported that children from a former marriage may be subjected to abuse and neglect.

While the community identified the above sustainability issues, the prevalence of poverty (together with the perceived loss of *Unhu* and the lack of agency) served as serious impediments to act on them locally. The researchers explored the issue of an educational response by exploring their views on quality and relevance.

Perspectives on educational quality and relevance

Table 2 summarises perspectives on the theme 'quality of education'. Issues under this theme manifested themselves under four sub-themes, under which observed conditions implicate

Table 2. Observations made with respect to 'quality of education'

Themes	Sub-themes	Examples Observed or Cited	Stakeholder
Quality of education	Infrastructure	Old farmhouse school in disrepair; no windows or doors; no furnishing; Blair toilet under construction.	Parents, teachers
	Access/participation	Children looking hungry, dirty, no uniform, no warm clothing, no shoes, no Grade 7, absenteeism, poor retention, high transfer, drop-out, walking distance, satellite school, enrolment 120, composite Grade 4-5 and Grade 0-1, orphans 40-50, children or teachers late to school, assembly 09h00 hours, <80 of 120 learners at assembly.	Teachers, parents, pupils, community leaders
	Learning resources	Few reading and writing materials or books, no books, no pens, walls used for chalkboard work, no charts displayed.	Teachers, pupils, parents
	Teaching staff	Quality of teachers, non-resident in community, commuting, walk to and from school, long distance, poor transport, late arrival, motivation, poor remuneration, supervision, teacher-community relations, absent-sick.	Teachers, parents

poor educational quality. It is important to note the particular perspectives on educational quality and relevance that refer to school–community relationships. These relationships relied quite significantly on teacher–community relations. At the start of the research process, teacher–community relationships were marked by suspicion and tension. There was infrequent contact between teachers and members of the community. Teachers did not live in the community and commuted every day from the city. They did not have other responsibilities at the community level other than their classroom work. As noted in other contexts, teacher–community engagement is desired to promote knowledge, values and action on environment and education for sustainable development issues (Ndaruga & Irwin, 2006).

Table 3 summarises the observations under the theme ‘Teacher–community cooperation/reciprocation’. Under this theme, four sub–themes pertaining to teacher–community relations – community mobilisation, community agency and external agency – have been identified. School–community outreach programmes were absent, but the community suggested adult literacy programmes, women’s clubs and community education campaigns could be held at the school. It was acknowledged that education about development projects, HIV/AIDS and environmental issues relating to veldt fires, stream–bank and steep–slope cultivation, tree cutting, and *chikorongoza*, which posed serious sustainability challenges, was necessary.

Table 3: Observations made with respect to ‘teacher–community cooperation/reciprocation’

Themes	Sub–themes	Examples Observed or Cited	Stakeholder
Teacher–community cooperation/reciprocation	Teacher–community relations	High expectations for development of school, 40 parents attended school–community meeting, high expectations for community involvement with school, visit sick and other social activities, attend funerals, interact/work with community.	Teachers, parents, community leaders
	Community mobilisation	Welcoming, local leadership involved, small projects initiated, 40 parents at community meeting, perceived difficult to change.	Teachers, parents, pupils, community leaders
	Community agency	School community meetings, AFM (a faith–based organisation) donated benches, repaired a door and uses school as venue for services; repairs to some windows, fitted chalkboards, brick moulding, toilet construction, garden project, improved enrolment and retention, children not to be home guards, gully reclamation, exercise–book project, donation of house for teachers to stay.	Teachers, parents, community leaders
	External (researcher) agency	Paper, book, used diary, charts and models collection, 4 th WEEC charts, games, resource books, information tracts, national flag, football, netball.	Researchers and donor partners

Tensions in school–community relations showed in the lack of awareness among many parents on what goes on in school and the different perspectives on educational purpose and relevance. Both teachers and learners were frequently absent from school. On the part of learners, absenteeism reflected poor parental supervision and enforcement of regular school attendance, exploiting child labour, and lack of appropriate dress or uniform for school attendance.

Teachers perceived the community to be uncooperative in supporting the development of the school and in supporting learners needs (e.g. fees, books and uniforms). They perceived many parents as not valuing schooling, as it was perceived that people in the community who had money to buy necessities were not highly educated. On the part of some members of the community, the relevance of education was judged according to whether or not someone will be able to make lots of money. Some parents reportedly withdrew their children from school so that they can join them in their different trades, including gold panning and vending. Some parents disapproved of the school tackling themes considered cultural taboos. For example, some disapproved of children singing about HIV/AIDS at the first community meeting.

These tensions eased during the course of the exploratory research. Discussions at the community meetings and children’s performances appeared to contribute to this. For example, at the third community meeting, HIV/AIDS awareness poems did not elicit disapproval, as had been evident at the first meeting. Table 4 summarises observations made with respect to the theme ‘relevance/value of education’. Responses of parents coalesce around development of academic competencies, while those of teachers and learners focus on social competencies. All three stakeholders identify developing environmental action competency as an important theme for relevance of education.

Table 4. Observations made on the theme ‘relevance/value of education’

Themes	Sub-themes	Examples Observed or Cited	Stakeholder
Relevance/ value of education	Academic competency	Develop reading and writing competency.	Parents
	Social competency (life skills)	Children’s rights, child abuse, love, peace, care and social relationships; poems on environmental awareness and action, e.g. fighting veld fires and gully reclamation.	Pupils, teachers
	Environmental action competency/ responsiveness	Gully reclamation, nutrition, garden, flower beds, water, preventing HIV/AIDS, preventing spread of diarrhoea.	Pupils, teachers, parents

Many parents expressed surprise at the range of socially relevant messages children expressed in drama, poetry, song and role-play at community meetings. Children extolled good behaviour, love, happiness, freedom and *dzidzo* (learning, education). They expressed perspectives on their school and the educational value it added. Pupils expressed a desire for relational attributes, such as love, respect, concern, peace and consideration for others’ rights; and for care, protection, and education. Pupils also demonstrated that they were learning useful environmental education

messages including the importance of good conservation and management of the environment, good hygiene and health practices, good farming practices, and the importance of diligence, hard work and responsibility. Learners also pleaded with parents to keep children in school, to respect children's rights, to shun child labour, and to protect children from abuse. In the end, learner, parent and teacher perspectives on relevance of education conflated on promoting positive social competencies. These competences included relationships and life skills. Wals (2007) suggests that educational practices need to promote and engender social relationships. It is in the social relationships that attitudes and perceptions about equality, human rights, respect, and tolerance will be evident.

Implications of the Results and Findings

Influence of context

The exploratory case study demonstrates that particular perspectives on sustainability depend to a large extent on the context and setting in which the issues manifest themselves. In this case, the community was poor and vulnerable. It faced serious challenges attributed to tensions within the community and between the community and the school, which in turn were influenced by macro-level developments. The community school provided formal education of poor quality, yet was relevant in its messages. For example, due to lack of cooperation and reciprocation, parents and community members were not conversant with what school offered to the children and erroneously perceived the relevance of education provided negatively. The community school was not being used a community centre and informal education opportunities were frugal in the community. This contributed to behaviour patterns and practices that were not sustainable. For example, some took up an illegal gold panning. Both gold panning and some farming practices led to environmental degradation that was likely to contribute to further poverty and vulnerability. Many people's reported sexual behaviour was inconsistent with HIV/AIDS preventative measures, increasing risk. The quality of the environment was under constant threat. The quality of formal education in the school was compromised. Informal education opportunities suffered due to lack of solidarity. The perceived lacking solidarity made the community unable to envision development activities and projects collectively. This solidarity and social cohesion was threatened by poverty and by the loss of the traditional ethical and moral framework, *Unhu/Ubuntu*.

The traditional ethical and moral framework *Unhu/Ubuntu* is important when it comes to dealing with educational, environmental and developmental issues in African communities (Mbigi & Maree, 2004). Mbigi and Maree observe that *Ubuntu* is a valuable concept for environment and education for sustainable development and for survival of African communities. Loss of *Unhu/Ubuntu* leads to unsustainable lifestyles and to lack of solidarity and collectivity to explore opportunities to resolve known problems in the community. In our research community, loss of *Unhu* created behaviours and lifestyles that are inconsistent with sustainability and with maintenance of communal institutions such as the school.

Impact of the research on collective agency

Overall, the exploratory research had the catalytic effect in bringing the community and the school together. This it did by facilitating school-community meetings to share perspectives and to learn the reciprocal roles played by the school in the community's development and by the community in the school's development. There was a realisation that the quality of education its children were receiving was below standard and compromised by a number of factors; such as difficulties in getting school fees, a lack of textbooks and exercise books, poor infrastructure, lack of furniture, lack of playgrounds, and a lack of ablution facilities. The learning environment was poor as the old farmhouse school was in state of disrepair. There was a realisation of the need to self-mobilise and to propose and implement school improvement and community development projects. Consensus was reached that such initiatives required positive teacher-community relations and school-community collaboration and solidarity. Improved teacher-community relations and positive interactions were desirable for collaboration in school improvement and for the community to mobilise and implement educational and development projects. The community demonstrated agency by repairing a door and windows of the school building, fitting chalkboards to classroom walls, and by initiating projects involving toilet construction, gardening, gully reclamation, an exercise-book project, and donation of house for teachers to stay in. There was an acknowledgement of responsibility and agency.

Reflections on the Broader Research Questions

This catalytic research provides lessons leading to the wider, and the grander, of the aims of the SADC REEP's supported exploratory collaborative research in southern Africa. In a Zimbabwe community, the research process was beginning to make a difference. The research instilled a sense of cohesion among teachers and between teachers and the community to work together on the challenges of quality environment, education and development. Together, they began to enumerate, examine and propose practical actions relating to sustainable development and quality education issues. As described above, practical actions that they initiated included: starting an exercise book project, setting up a school nutrition garden, uplifting of the farmhouse school, brick moulding and construction of a Blair toilet.

At meetings, parents listened intently to the recitals by the children, something which they probably were not used to in the past. At the very least, the community meetings provided an opportunity for all to be motivated to learn and act. Finally, it would seem that the research made the community realise that the school could serve as a community centre where positive ideas can be shared and disseminated. Further mobilisation should lead to completion and sustenance of current initiatives and initiation of new development projects, propelling the community towards sustainability and quality, relevant education. In the case of the latter, the community must mobilise to increase teacher-community cooperation and reciprocation. This might help reduce the current reported competition between education and domestic chores. Cooperation has the potential to help to challenge attitudes that promote absenteeism and inadequate prioritisation of children's education. For example, some children miss school to look after the home when parents go to meetings, funerals and other functions. Cooperation

between the school and the community would seem to be a very important way to raise awareness of the value of the immediate and long-term value of education. As observed in this community, curriculum relevance can be increased by examining the local environment and the sustainability issues it poses and presents, and by involving parents in discussing the local sustainability issues. The research framework tried to link educational practices with community efforts to develop. It means that sustainable development activities and goals defined by the community required the support of education. Education and the school curriculum needed to reinforce the community's sustainable development goals. The clearest implication of this exploratory research is that environment and sustainability education can contribute to educational quality and relevance in this community.

Pupils and teachers demonstrated appreciation of the importance of water for life, the importance of a safe and secure environment, the value of respecting others and their rights, the importance of good social relationships, hard work and *Unhu/Ubuntu*, and the value of chastity and freedom from disease and HIV/AIDS and breaking the silence surrounding it. They demonstrated appreciation of the need to contribute and actively implement suggestions for development projects. These are important environmental education and education for sustainable development concepts and practices that have the potential to enhance quality and relevance of learning opportunities – not only for children, but also for members of their community. Creating opportunities to learn environment and sustainability concepts, practices and values has potential to increase the perceived relevance and quality of education. Therefore, this research proposes that there is a case to answer in the affirmative the question: Can we make the case that environment and sustainability education contributes to educational quality and relevance? If the community is aware of environmental and sustainability issues, they can begin to think in terms of 'forever' and make appropriate decisions that map out long-term and stable conditions in their environment. In this case study, environment and sustainability education contributes to the quality and relevance of education, as it addresses issues with which people are concerned. It helps the school community to respond to risk and vulnerability, reflecting upon and re-shaping their own values and attitudes. This helps to develop a sense of empowerment, with some outcomes visible for transforming their community. The '*DESD at a Glance*' document (UNESCO, 2006c) states that 'change towards a better quality of life starts with education'.

In this research, the environment and sustainability issues that the community defined provided opportunities for individuals, the family and the community to personalise and socially situate the meaning of education and of development. For example, if in their everyday lessons (children), work and decisions (the community), they could reflect upon the finiteness of the village and its ecosystem resources and how they must live within these finite limits if long-term sustainable lifestyles are to be realised. On the question of the cause of poverty and of the spread of disease and HIV/AIDS, children and adult members of the community needed to learn in their respective ways (formal and non-formal) and at their level how they may contribute to the problem and to the solutions. This, as shown in this exploratory research, can be accomplished if the school is considered as a community centre *and* a centre of learning, in formal, non-formal and informal ways.

The research suggests a direct link between the provision of environment and education for sustainable development and the quality education imperative. Both environmental education and education for sustainable development discourses aim to improve the quality of life for all, especially the deprived and marginalised. While traditionally environmental education focussed more on restoring biological and ecological diversity and integrity, and the relation to livelihoods and development, ESD tackles the problems of poverty and its connection to malnutrition, health, HIV/AIDS, food security and to the fulfilment of human rights, in addition to the focus on ecological relations and livelihoods. Education for sustainable development seeks to avert the unsustainable use and consumption of natural resources that disrupts natural environments and intensifies poverty. Reducing poverty, improving health and maintaining ecological structures is expected to improve quality of life. If central sustainability issues are included as topics in the formal and non-formal education of children and adults, as is the case in the community we engaged, then they would understand and take steps to tackle land degradation, illegal mining, risky sexual behaviours, and the loss of family values and *Unhu*.

As we worked, we also pondered the questions: How do we work with research information and processes to benefit community? What is the practical value of research? In this exploratory research project we explored sustainability issues in a community to identify how the education system is responding and how sustainability issues are defined from the community perspective. The intention was to model a way of mapping sustainability issues and to generate educational responses that take community perspectives into account. During the research process, it became apparent that it was not only an educational response that was needed – rather, collective social action of the community was necessary to address sustainability issues through project work. The scientific basis of the projects needed to be embedded in the curriculum. The research demonstrated, albeit on a small scale, that a stronger school-community interface has potential to have a powerful influence on quality and relevance of education, and on learning about environment and sustainability.

Conclusion

The results presented suggest that it is possible to propose that environment and sustainability education contributes to educational quality and relevance of education for all. The community can be mobilised or can be supported to self-mobilise to work towards the improvement of quality and relevance of education and to transforming quality of life. Education that is relevant and of good quality provided formally through the school and non-formally or informally through community meetings and interactions can lead to the learning values and practices that lead to environmental quality and to sustainability. The research process and results lead to a question for further exploration: How can quality and relevant education for all contribute to environment quality and sustainability in southern Africa? As shown in this research, this may require, at the community level, greater opportunities for sharing and interaction in a reciprocal way among teachers, the school and the community – i.e. greater school-community interface. It may also require opportunities that enable teachers and the community to evolve an understanding of sustainability issues that must be addressed educationally and through

collective social and development projects in the community. It shows too that education should not be narrowly conceived as school-based. The school needs to serve not only as a central place where children and teachers meet; it has to serve a much bigger role. First, it needs to serve as a community centre that is also a centre of learning for all. As such, being a community centre, it must cater also for the adult learning needs of its elder members. The research established that an opportunity exists for parents to meet at the school on the day when the community observes a day of rest, *chisi*. Meeting on such a day would enable teachers and members of the community to share and learn in non-formal ways. As such, the school can become a community centre relevant for community mobilisation and participation (Abiona, 2006), while also attending to issues that improve the quality and relevance of the learning experience of learners in the schools.

Notes on the Contributors

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Endnote

1. Available at <http://www.sadc-reep.org.za>, visited October 2008.

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Acknowledgements

The authors acknowledge with gratitude the support of the Wildlife and Environment Society of Southern Africa and the Southern Africa Development Community Regional Environmental Education Programme, which provided funds for the project. Special mention must be made of Dr Jim Taylor, Dr Justin Lupele and Sally Cumming. We acknowledge and thank Prof. Heila Lotz-Sisitka at Rhodes University, South Africa, who initiated and coordinated the collaborative research.